

Applicants: Long Sheng Yu, et al.
U.S. Serial No.: 10/799,534
Filed: March 12, 2004
Page 2

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A ventricular assist device for a heart, which comprises:

a pump portion,

an inflow tube protruding from the pump portion;

an adapter sleeve of a first predetermined length attached to the inflow tube forming an extended inflow tube having a total length greater than the first predetermined length, said extended inflow tube configured to pass through a wall of a ventricular apex of a heart; and

a gripping member having an opening configured to receive said extended inflow tube and couple to an exterior surface of said extended inflow tube.

2. (Cancelled)

3. (Currently Amended) The ventricular assist device of claim 1, further comprising a sewing ring configured to attach said gripping member to [[a]] said ventricular apex of [[a]] said heart.

4. (Previously Presented) The ventricular assist device of claim 1, wherein the adapter sleeve comprises a smooth cylinder of titanium.

Applicants: Long Sheng Yu, et al.
U.S. Serial No.: 10/799,534
Filed: March 12, 2004
Page 3

5. (Previously Presented) The ventricular assist device of claim 1, wherein said adapter sleeve includes cylindrical grooves forming perforations on the surface of the adapter sleeve, said grooves configured to separate said adapter sleeve along said grooves.

6. (Previously Presented) The ventricular assist device of claim 1, wherein said adapter sleeve is formed of ceramic.

7. (Cancelled)

8. (Previously Presented) The ventricular assist device of claim 1 wherein the inflow tube includes a bent end.

9. (Previously Presented) The ventricular assist device of claim 1 wherein the inflow tube includes an extendable end.

10. (Original) The ventricular assist device of claim 1 wherein the inflow tube includes a rotatable end.

11. (Cancelled)

12. (Currently Amended) A ventricular assist device for a heart comprising:

a pump portion;

a sewing ring;

an inflow tube protruding from the pump portion;

an adapter sleeve attached to the inflow tube forming an extended inflow tube, said extended inflow tube configured to pass through a wall of a ventricular apex of a heart;

a coupling having gripping pads configured to attach said coupling to the extended inflow tube adapter sleeve and said coupling configured to attach to said sewing ring, said sewing ring configured to attach to the ventricular apex of [[a]] the heart, and the adapter sleeve is formed of a smooth cylinder of titanium, said adapter sleeve including an adjustable attachment member configured to attach the adapter sleeve to the inflow tube and configured to permit said adapter sleeve to extend and retract relative to an end of said inflow tube.

13. (Cancelled)

14. (Previously Presented) The ventricular assist device of claim 1, wherein said adapter sleeve includes an adjustable attachment member configured to attach said adapter sleeve to said inflow tube, said adjustable member configured to permit said adapter sleeve to extend and retract relative to an end of said inflow tube.

15. (Previously Presented) The ventricular assist device of claim 1, wherein said gripping member includes gripping pins having gripping pads, said gripping pads configured to couple to said exterior surface of said extended inflow tube.

Applicants: Long Sheng Yu, et al.
U.S. Serial No.: 10/799,534
Filed: March 12, 2004
Page 5

16. (Previously Presented) The ventricular assist device of claim 15, wherein said gripping member includes a cylindrical ring adapted to receive said gripping pins.

17. (Previously Presented) The ventricular assist device of claim 16, wherein said gripping member includes a spring ring, said spring ring concentrically surrounding said cylindrical ring and configured to attach to said gripping pins at an end opposite said gripping pads.

18. (New) An apparatus comprising:

a cylindrical sleeve having an inner wall portion configured to extend over and form a seal against a standard sized ventricular assist pump inflow tube, the cylindrical sleeve forming an extended inflow tube configured to pass through a heart wall having a thickness;

the cylindrical sleeve having a length greater than a standard sized ventricular assist pump inflow tube length; and

a coupling portion configured to attach the cylindrical sleeve to a ventricular apex of a heart.

19. (New) The apparatus of claim 18, further comprising perforations in the cylindrical sleeve configured to allow breaking off a portion of the cylindrical sleeve to provide predetermined length adjustments.

20. (New) The apparatus of claim 19, wherein the predetermined length adjustments are configured to match different heart wall thicknesses.

Applicants: Long Sheng Yu, et al.
U.S. Serial No.: 10/799,534
Filed: March 12, 2004
Page 6

21. (New) The apparatus of claim 18, wherein the coupling portion includes a sewing ring attached to the cylindrical sleeve and configured to connect to a ventricular apex of a heart by surgical stitching.

22. (New) The apparatus of claim 18, wherein the coupling portion includes a textured surface for engagement with a ventricular apex connector.

23. (New) The apparatus of claim 22, wherein the ventricular apex connector has an inside diameter configured for sealingly engaging with an outside diameter surface of the cylindrical sleeve.

24. (New) The apparatus of claim 23, wherein the ventricular apex connector includes a cylindrical ring having at least two apertures.

25. (New) The apparatus of claim 24, wherein the ventricular apex connector includes at least two gripping rods, each of the at least two gripping rods being disposed through one of the at least two apertures.

26. (New) The apparatus of claim 25, wherein the ventricular apex connector includes at least two gripping pads, each of the at least two gripping pads connected to one of the at least two gripping rods and being positioned within an area defined by the cylindrical ring.

Applicants: Long Sheng Yu, et al.
U.S. Serial No.: 10/799,534
Filed: March 12, 2004
Page 7

27. (New) The apparatus of claim 26, wherein the ventricular apex connector includes a spring ring, the spring ring concentrically surrounding the cylindrical ring and attached to the at least two gripping rods at an end opposite the at least two gripping pads.